Remarks

In response to the Office Action dated October 15, 2008, Applicants respectfully request reconsideration based on the above claim amendment and the following remarks. Applicants respectfully submit that the claims as presented are in condition for allowance. Claims 1, 4, 11-12, 14, 25, 36, 43, 49, 60, 69, 78, and 84 have been amended.

Claim Rejections – 35 U.S.C. §112

Claims 1-5, 7-39, 41-52, 54-87 stand rejected under 35 USC §112 second paragraph, as being indefinite for failing to particularly point and distinctly claim the subject matter which applicant regards as the invention. Specifically, independent claims 1, 14, 25, 60, 69, 78 and 84 stand rejected for including the recitation "the content" which allegedly lacks antecedent basis. The recitation has been amended to read "a content". As such, the independent claims have antecedent basis. Therefore the rejections may be withdrawn.

Claim Rejections - 35 U.S.C. §103

Claims 1-5, 7-39, and 41-52 and 54-87 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sharon (U.S. Pat. 6,137,782), in view of Galand (U.S. Pat. 6, 529,475) and further in view of Messinger et al. (U.S. Pat. 6,687,750). The rejection of these claims is respectfully traversed.

It is respectfully submitted that the combination of Sharon, Galand and Messinger fails to describe each and every feature specified in amended independent claim 1. In its rejection, the Office Action concedes that Sharon fails to describe a) that a packet state includes a congested state; b) creating a histogram file; c) analyzing the stored traffic log to determine the time of creation of the traffic log and updating the histogram using at least the time of creation of the traffic log or d) that the histogram file is utilized to monitor network conditions in near real-time enabling the detection and correction of network overloads and congestion before network customers are affected. The Office Action proceeds by asserting that Galand describes a) that the packet state includes a congested state.

The Office Action also concedes that the combination of Sharon and Galand fails to describe recitations b, c and d, above. The Office Action proceeds further by asserting that Messinger cures these conceded deficiencies in the combination of Sharon and Galand.

Claims 1-5 and 7-13

Without conceding the correctness of the rejection, claim 1 has been amended to clarify that the traffic log being generated is a traffic log specific to a particular packet. Amended independent claim 1 recites, in pertinent part:

"[a] method of monitoring a packet-switched network using traffic logs, comprising…
(b) generating, at a first location within the packet-switched network, a traffic log specific to a particular packet based upon detection of a content of the packet, the traffic log containing a plurality of values detected within the packet comprising a network entry point of the packet, a network exit point of the packet, and a packet state, wherein the packet state includes a congested indication …
(e) analyzing the stored traffic log to determine the time of creation of the traffic log and one or more nodes of a path traversed by the packet through the packet switched network from the network entry point to the network exit point…"

Applicants respectfully assert that in addition to the conceded deficiencies in the combination of Sharon and Galand listed above, the combination of Sharon, Galand and Messinger fails to describe "generating…**a traffic log specific to a particular packet** based upon detection of a content of the packet the traffic log containing a plurality of values detected within the packet comprising a network entry point of the packet, a network exit point of the packet, and a packet state". Sharon also fails to describe "**analyzing the stored traffic log to determine the time of creation of the traffic log and one or more nodes of a path taken by the packet through the packet switched network from the network entry point to the network exit point".**

Sharon addresses a method for automatically analyzing the traffic topology of a network by correlating information received from "agents" dispersed throughout a known physical network. (Abstract). The flow of packets is analyzed by detecting the packets as they are transported through a node in the network. (Col. 3, l 62-63) and sorting the destination and source addresses to determine traffic information flowing between each pair of nodes. (Col. 3, l. 66- Col. 4, l. 4). Each agent collects any (i.e., all) information received by a network card/connector (Col. 6, l. 48-51) local to the agent. The traffic information is sent to a network parser 34 which then filters each frame according to a characteristic of the frame such as source address, destination address, type of frame and protocol. The network parser 34 then ***summarizes*** the aggregated sorted data and stores it in a ***database*** (Col. 6, l. 65-Col. 7, l. 7).

As such, Sharon is describing the capture of aggregated traffic information at a first location, transferring it to a second location and then sorting the information at the second location according to frame characteristics. The description in Sharon is contrary to amended claim 1 which recites generating, at a first location within the packet-switched network, **a traffic log *specific to a particular packet*** based upon detection of a content of the packet the traffic log containing a plurality of values detected within the packet comprising a network entry point of the packet, a network exit point of the packet, and a packet state …". Capturing aggregated information at a first location about a multitude of packets passing through a node and storing that information in a database is not generating at a first location…**a traffic log *specific to a particular packet*** based upon detection of a content of the packet. As such, Sharon fails to describe generating at a first location…a traffic log specific to a particular packet based upon detection of a content of the packet" because Sharon describes capturing aggregated data instead.

Applicants respectfully note that Galand fails to cure this discrepancy in Sharon. Galand is concerned with a congestion detection and control in a packet switched network. Galand describes that when a congestion situation is encountered by a packet at a node the node sets a packet header field to "1". When the congestion field is detected at the destination end-user, the end-user device sets a congestion field set to "1" in a return packet so that when the return packet reaches the sending end-user a counter is incremented or decremented thereby providing a feedback mechanism to the sending unit to take congestion control actions. Galand is not describing "generating, at a first location within the packet-switched network, **a traffic log *specific to a particular packet*** based upon detection of a content of the packet …" There is no description of a traffic log specific to a particular packet described in Galand. Setting a header field to "1" or incrementing a counter at a sending device is not generating a traffic log specific to a particular packet. A packet is not also a packet log. As such, Galand fails to cure this discrepancy in Sharon.

Messinger is concerned with assembling aggregated network information in a database and then querying the database for information about a network node to be rendered as a visual display. Messinger describes that routers collect aggregated information about all of the data that passes through them. A reporting application *monitors the state of each network component* as the data transits the network and stores the aggregated information in a network information storage file from which it is subsequently retrieved for display. (Col. 1, l. 64-67). The reporting

application appends the new results to the storage files 204-208. The user then manually queries the storage files 204-208 using filters for later use in the visualization application. Messinger is silent as to what information is collected at the router or what data is stored in the information storage files 204-208. Messinger also fails to describe "generating, at a first location …**a traffic log *specific to a particular packet*** …" To the contrary, Messinger describes collecting aggregated data. As such, Messinger fails to cure this deficiency in the combination of Sharon and Galand.

Therefore because none of Sharon, Galand or Messinger describes "generating, at a first location…**a traffic log *specific to a particular packet***…", their combination also fails to describe "generating, at a first location …**a traffic log *specific to a particular packet***…". As such, amended independent claim 1 is allowable over the combination of Sharon, Galand and Messinger for at least his reason due to a lack of a prima facie case of obviousness.

Further, the Applicants respectfully assert that the combination of Sharon, Galand and Messinger fails to describe, "…analyzing the stored traffic log to determine…one or more nodes of a path traversed by the packet through the packet switched network from the network entry point to the network exit point" as recited in amended independent claim1.

In its rejection on page 5, the Office Action asserts that Sharon describes "analyzing the network entry and exit points of the packet" and specifically cites Column 8, lines 10-30 in support of its assertion. However, Applicants respectfully point out that the cited portion of Sharon fails to describe the subject matter asserted to Sharon by the Office Action. The cited portion of Sharon merely describes that the "network parser 34 analyzes the header in each received packet for **source and destination [IP] addresses**…" Applicants respectfully assert that a packet header is not a stored log traffic file and that determining a source and destination address of a packet does not describe determining one or more nodes of a path traversed by the packet through the packet switched network from the network entry point to the network exit point a network entry point of the packet or a network exit point of the packet.

As discussed above, Sharon fails to describe a log file specific to a particular packet. In addition, a source/destination address (i.e. an end-user device) as described by Sharon is not a network entry or exit point. A distinction exists between a source/destination device (i.e., an end-user computer) and a network entry/exit point. A source/destination device (i.e., an end-user device) may communicate via a network and have an IP/MAC address but is not part of the

network nor is it an entry or exit point of the network. A source/destination device is connected to a network by an edge router or a modem. An edge router/modem of a network device must establish access to/from the network for a source/destination computing device in order for the source/destination computing device to communicate via a network. In contrast, a network entry/exit point is by definition part of the network. As such, a network entry/exit point is not a source or a destination computing device and vice versa.

As a further example, in traveling from the source address (i.e. a sender) to a destination address (a recipient), a packet may transit within or across one or more networks other than the network that is being monitored. In such a case, the packet may enter and exit more than one network. Each network would then have its own entry and exit point. As such, a source and/or destination address (i.e. end users) may not have even the most tenuous relationship with the packet's entry or exit point of the particular network being monitored. Because source and destination addresses apply to the sending and receiving end users and entry and exit points are structural parts of a specific network, source/destination addresses are fundamentally different from entry/exit points of a network even when there is only a single intervening network. Therefore, because Sharon fails to describe analyzing the stored traffic log to determine one or more nodes of a path traversed by the packet through the packet switched network from the network entry point to the network exit point, Sharon fails subject matter asserted to Sharon by the Office Action.

As discussed above, Galand is concerned with incrementing a congestion counter at the sending device. Galand also describes differences between a source/destination and an entry/exit or exit point of a network. (FIG. 2, Gig. 8, Col. 3, l. 28-58; Col. 6, l. 26-51). Galand also describes that the data flow at ach node is monitored to detect congestion at the node. However, Galand does not describe "...analyzing the stored traffic log to determine...one or more nodes of a path traversed by the packet through the packet switched network from the network entry point to the network exit point...". As discussed above, there is no traffic log described in Galand. Because Galand does not describe a traffic log , Galand cannot describe analyzing the non-existent traffic log.

Galand does describe a packet header. (Col. 6, l. 60). However, Galand does not describe that a packet header is analyzed to "to determine...one or more nodes of a path traversed by the packet through the packet switched network from the network entry point to the network exit

point…". Since Galand does not describe "analyzing the stored traffic log to determine …one or more nodes of a path traversed by the packet through the packet switched network from the network entry point to the network exit point", Galand fails to cure this discrepancy in Sharon.

As discussed above, Messinger merely describes that information may be collected by a router through which the data passes and that the information is stored in a separate file from which it is retrieved for display. Messinger fails to describe "…analyzing the stored traffic log to determine …one or more nodes of a path traversed by the packet through the packet switched network from the network entry point to the network exit point", because Messinger fails to describe a traffic log [specific to a particular packet]. Messinger further fails to describe determining …one or more nodes of a path traversed by the packet through the packet switched network from the network entry point to the network exit point". As such, Messinger fails to cure this discrepancy in the combination of Sharon and Galand. As such, amended independent claim 1 is allowable over the combination of Sharon, Galand and Messinger for this additional and independent reason. Claims 2-5, 7-13 depend from an allowable independent claim 1 and are allowable for at least the same reasons.

Claims 14-39, 41-52 and 54-87

Amended independent claim 14 recites, in pertinent part:

"[a] method of monitoring packet traffic through a node of a packet-switched network using traffic logs, comprising…(b) generating a traffic log specific to a particular packet based upon detection of a content of the packet at a first location within the network based upon detection of the content of a packet

As discussed above in regard to amended independent claim 1, the combination of Sharon, Galand and Messinger fails to describe "generating…**a traffic log specific to a particular packet** based upon detection of a content of the packet at a first location…". As such, amended independent claim 14 is allowable over the combination of Sharon, Galand and Messinger for at least the same reasons. Amended independent claims 25, 36, 43, 49, 60, 69, 78 and 84 recite similar subject matter and are allowable for at least the same reasons. Claims 15-24, 26-35, 37-39, 41-42, 44-48, 50-52, 54-59, 61-68, 70-77, 79-84 and 85-87 depend from an allowable independent claim 14, 25, 36, 43, 49, 60, 69, 78 or 84 and are allowable for at least the same reasons.

As to claim 36, in addition to reciting the allowable subject matter described above, Amended independent claim 36 also recites that the a packet includes a "traffic state indication of at least one of the following data elements: an "OK" state, an "illegal" state, a "congested" state and an "error" state. Applicants respectfully assert that the combination of Sharon, Galand and Messinger is silent concerning the use of a *traffic state indication* of at least one of the following data elements: an "OK" state, an "illegal" state, a "congested" state and an "error". As such, amended independent claim 36 is allowable over the combination of Sharon, Galand and Messinger for at least the additional and independent reason.

Claims 2, 15, 26, 37, 46, 50, 61, 70, 79, and 85

Claims 2, 15, 26, 37, 46, 50, 61, 70, 79, and 85 depend from an allowable independent claim 1 14, 25, 36, 43, 49, 60, 69, 78 or 84 and further recite that the histogram file is a flat file. The Office Action asserts that Messinger describes a histogram file that is a flat file and cites Col. 1, l. 57-67; Col. 2, l. 1-37; Col. 3, l. 28-52; Col. 4, l. 6-19 in support of its assertion. Applicants respectfully note that none of the citations, Messinger in general or the combination of Sharon, Galand and Messinger describes a histogram file that is a flat file.

Applicants respectfully note that Messinger describes that information may be presented visually as a bar chart. (Col. 4, l. 14-15). However, without conceding that a bar chart is a recited histogram, Applicants respectfully point out that Messinger is silent as to what kind of file the bar chart is derived from. Messinger merely describes the network files 204-208 as "information files" but never describes the type of file. Messinger clearly does not describe that the network files are flat files as opposed to a relational database file or other type of data structure. Applicants further assert that neither Sharon nor Galand describes a histogram file that is a flat file and respectfully points out that the Office Action concedes (see, page 6) that the combination of Sharon and Galand fails to describe the use of a histogram at all. For at least these reasons, the combination of Sharon, Galand and Messinger fails to describe that the histogram file is a flat file. As such, claims 2, 15, 26, 37, 46, 50, 61, 70, 79, and 85 are allowable over Sharon, Galand and Messinger for at least this independent reason.

Claims 7, 18, 29, 54, 63, and 72

Claims 7, 18, 29, 54, 63 and 72 depend from an allowable independent claim 1, 14, 25, 49, 60 or 69 and are allowable for a at least the same reasons. However, Applicants respectfully note that the combination of Sharon, Galand and Messinger fails to describe that the histogram plots packets per minute versus time. As described above, the Office Action concedes that the combination of Sharon and Galand fails to describe a histogram but proceeds by asserting that Messinger describes a bar chart and that the bar chart plots packet per minute versus time. Without conceding that Messinger's bar chart is a histogram as recited, Applicants respectfully note that the cited portions of Messinger (Col. 1, l. 57-67; Col. 2, l. 1-37; Col. 3, l. 28-52; Col. 4, l. 6-19) do not describe bar chart plots packets per minute versus time. Messinger merely describes that a parameter of interest may be the number of log-in attempts made from a particular computer by a hacker. (Col. 4, l. 19-62). Plotting the number of log-in attempts made from a particular computer by a hacker is not plotting the number of packets per minute versus time. As such, Messinger fails to describe the subject matter asserted to it by the Office Action. Because the combination of Sharon, Galand and Messinger fails to describe plotting packets per minute versus time, claims 7, 18, 29, 54, 63 and 72 are allowable over the combination of Sharon, Galand and Messinger for at least this additional and independent reason.

Conclusion

In view of the foregoing amendments and remarks, this application is now in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is invited to call the Applicants' attorney at the number listed below.

No additional fees are believed due other than a one month extension of time. However, please charge any additional fees or credit any overpayment to Deposit Account No. 50-3025.

Respectfully submitted,

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